

are notable. Improving health outcomes through pricing strategies is likely to require a broader selection of targeted foods, the deployment of higher subsidies/taxes and the use of well-designed complementary strategies. The feasibility, sustainability and acceptability of such approaches would need to be considered by remote food suppliers.

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Invited talk: IC7: A novel therapy for the treatment of metabolic disease



Mark Febbraio

Garvan Institute of Medical Research, Darlinghurst, NSW, Australia

We have previously shown that the gp130 cytokines interleukin-6 (IL-6) and ciliary neurotrophic factor (CNTF) can improve obesity and insulin resistance in both mice and humans [1,2]. However, due to the known inflammatory effects of IL6 and the antigenic response in some patients to the clinically used form of CNTF (Axokine), both proteins have no therapeutic utility. In an attempt to overcome this issue, we have designed a chimeric gp130 ligand, termed IC7, where one gp130 binding site has been removed from IL6 and replaced with the LIFR binding site from CNTF. This 'module swap' creates a new cytokine with CNTF-like, but IL-6R dependent activity. In a series of experiments, we have shown that IC7 has similar positive metabolic effects as CNTF, but may overcome the negative effects experienced by Axokine. Specifically, IC7 significantly improved glucose tolerance and hyperglycaemia and prevents weight gain and liver steatosis in obese mice. In addition, we have shown efficacy and safety in a study in non-human primates (*Macaca fascicularis*). In addition, in comprehensive human cell based assays, we have demonstrated that IC7, unlike Axokine, results in no signs of immunogenicity. Thus IC7 is a realistic and viable next generation biological for the treatment of obesity and T2D, disorders that are currently pandemic.

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References

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oxidation in vitro via AMP-activated protein kinase. *Diabetes* 2006;55:2688–97.

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Invited talk: Obesity in diabetes: Friend or foe?



John Wentworth

WEHI, Parkville, VIC, Australia

We associate obesity with poor clinical outcomes, including in people with type 2 diabetes. Compelling evidence links obesity in early life to higher risks of diabetes and death, justifying population-wide prevention efforts. However, obesity has been associated with improved rather than poorer diabetes outcomes and we lack good evidence that weight loss prevents diabetes complications and death. Obesity in diabetes might also confer health benefits in terms of enhancing beta-cell mass and maintaining bone health. These paradoxical findings will form the basis of discussion about the therapeutic role of weight loss in diabetes.

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Invited talk: Walt Whitman, Herman Melville, and the Challenges of obesity and diabetes



Clay Semenkovich

Washington University School of Medicine, St. Louis 63110, United States

Worldwide prevalence reports for obesity and diabetes over recent decades suggest that the chronic management of metabolic disease will dominate health care for the foreseeable future. Feeding behaviours contributing to obesity have been recognised for nearly a half-century, many of the key molecular mediators of central nervous system appetite control have been identified, and novel pharmacological agents have been introduced to treat obesity. However, less than robust results from medical management have promoted the pursuit of alternative clinical and scientific approaches. Anatomical interventions including bariatric surgery are gaining acceptance despite uncertainties about patient selection and